



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
[www.uspto.gov](http://www.uspto.gov)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/136,822	08/19/1998	SEIGO ITO	7217/56600	2193
7590	07/09/2004		EXAMINER	
			DAVIS, TEMICA M	
			ART UNIT	PAPER NUMBER
			2681	8
DATE MAILED: 07/09/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/136,822	ITO, SEIGO	
	<b>Examiner</b>	<b>Art Unit</b>	
	Temica M. Davis	2681	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 19 August 1998.  
 2a) This action is **FINAL**.      2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-73 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) 37-40,43-45 and 52-54 is/are allowed.  
 6) Claim(s) 1,2,7-11,13-20,22,23,26-35,41,42,46-51 and 55-73 is/are rejected.  
 7) Claim(s) 3-6,12,21,24,25 and 36 is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
     1. Certified copies of the priority documents have been received.  
     2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
     3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)	4) <input type="checkbox"/> Interview Summary (PTO-413)
2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)	Paper No(s)/Mail Date. _____.
3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date <u>1</u> .	5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)
	6) <input type="checkbox"/> Other: _____.

## DETAILED ACTION

### ***Double Patenting***

1. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

2. Claims 1, 7, 8, 14, 30, 35, 41, 46 and 48 are rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-3, 5, 7 and 8 of U.S. Patent No. 6,236,832. Although the conflicting claims are not identical,

they are not patentably distinct from each other because both inventions are drawn to transmitting a service request signal to request an acoustic signal/music related information desired by a user and receiving a transmission signal containing the acoustic signal/music related information in response to the service request signal and generating means which reads the demodulation/decoding means for applying demodulation and/or decoding processing to the signal received.

### ***Claim Objections***

3. Claim 70 is objected to because of the following informalities: In line 4, "si" should read --is--. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims 1, 2, 7-9, 11, 14-17, 20, 22, 24, 25, 27-30, 32, 35, 41, 42, 46, 48, 55-57, 59-61, 63, 64 and 71-73 are rejected under 35 U.S.C. 102(e) as being anticipated by Foladare et al (Foladare), U.S. Patent No. 5,819,160.

Regarding claims 1, 7, 14, 30, 35, 41, 46 and 48, Foladare discloses a wireless/vehicle-loaded acoustic receiving device with an inherent battery, comprising: wireless transmission means (col. 3, lines 60-66) for transmitting a service request signal (playlist ID) to request an acoustic signal desired by a user (col. 5, lines 51-61); wireless receiving means for receiving a transmission signal containing the acoustic signal transmitted in response to the service request signal (col. 6, line 48-col. 7, line 5); inherent demodulation/decoding means for applying demodulation and/or decoding processing to the signal received wireless receiving means and restoring the received signal to an acoustic signal as evidenced by the fact that the playlist is played back to the user (col. 7, lines 7-18); and electro-acoustic transform means for transforming the acoustic signal restored by the demodulation/decoding means to a sound wave for output to the user in stereo (col. 5, lines 1-5).

Regarding claim 2, Foladare discloses the wireless acoustic receiving device according to claim 1, wherein the electro-acoustic transform means is formed of at least two or more electro-acoustic transform elements and outputs the acoustic signal in stereo sound (col. 5, lines 1-5).

Regarding claims 8 and 42, Foladare discloses the wireless/vehicle-loaded acoustic device according to claims 7 and 41, further comprising display means for displaying the information concerning the acoustic signal to be received (col. 3, lines 49-58, col. 15, lines 39-45).

Regarding claim 9, Foladare discloses the vehicle-loaded acoustic device according to claim 8, further comprising remote control means in which control data for

operation control is entered through the remote control means (which reads on the wireless unit) (figure 1).

Regarding claim 11, Foladare discloses the vehicle-loaded acoustic device according to claim 8, further comprising television broadcasting receiving means in which the information concerning the acoustic signal received by the wireless receiving means and images of television broadcasting received at the television broadcasting receiving means are one of simultaneously and alternately displayed on the display means (col. 3, lines 44-58).

Regarding claim 15, Foladare discloses the portable acoustic output device according to claim 14, wherein the electro-acoustic transform element possessed by the electro-acoustic transform means is human body attachable (headphones) (col. 5, lines 1-5).

Regarding claim 16, Foladare discloses the portable acoustic output device according to claim 15, further comprising operating means for inputting control data in the case of receiving the acoustic signal (col. 4, lines 59-64, col. 6, lines 57-60; figure 1).

Regarding claim 17, Foladare discloses the portable acoustic output device according to claim 16, wherein the operating means comprises operation keys for inputting the control data regarding telephone communications (col. 4, lines 59-64; figure 1)

Regarding claim 20, Foladare discloses the portable acoustic output device according to claim 16, wherein the operating means comprises a plurality of pushing switches (keypad) (col. 4, lines 59-64).

Regarding claim 22, Foladare discloses the portable acoustic output device according to claim 16, further comprising display means for displaying information regarding the acoustic signal [to be] received by the wireless receiving means (col. 3, lines 49-58, col. 5, lines 39-45).

Regarding claim 32, Foladare discloses the wireless information retransmission device according to claim 30, wherein the retransmission means transmits the output signal using an electromagnetic wave with the frequency band over 10 MHz and below 1 GHz (since any wireless medium can be used) (col. 3, lines 63-66).

Regarding claims 55, 59, 60 and 63, Foladare discloses a music transmission method/device, comprising receiving a request signal from the terminal device; if the request signal is a first type signal, transmitting music selections in an order predetermined at a transmitting end; and if the request signal is a second type signal, transmitting optional music upon selecting from among a predetermined music group (col. 5, lines 51-61).

Regarding claim 56, Foladare discloses wherein if the request signal is a third type signal, transmitting the music determined at the terminal device (playlist ID) (col. 5, lines 51-61).

Regarding claims 57 and 61, Foladare discloses the music transmission method wherein the music group is comprised of music excluding music selections transmitted in the past (col. 6, lines 2-4).

Regarding claim 64, Foladare discloses a music receiving device, comprising: transmission means for transmitting a first request signal requesting a music transmission without specifying a music selection and for transmitting a second request signal which requests the music transmission specifying the music selection; and receiving means for receiving the music signal transmitted responding to the first request signal or the second request signal (col. 5, lines 51-61, col. 6, line 57-col. 7, line 17).

Regarding claim 71, Foladare discloses a data construction for specifying music data, characterized by: at least one or more units of data pairing a music name with a music code added to a music selection; and the unit data being arranged in a desired order and, based on that order, a time sharing order of the music is specified (col. 5, lines 51-61, col. 6, lines 9-12).

Regarding claim 72, Foladare discloses a music specification method utilizing a communication circuit, comprising the steps of transmitting material information for specifying music via a predetermined communication circuit; receiving a music list matching to the material information via the predetermined communication circuit; and specifying a desired music selection from the music list and transmitting the information showing the specified desired music selection via the predetermined communication circuit (col. 5, lines 51-61, col. 6, lines 2-27).

Regarding claim 73, Foladare discloses the music specification method in utilizing the communication circuit according to claim 72 , comprising the further steps of: memorizing the information showing the music specified in a memory and transmitting the information showing the specified music when a desired time comes (col. 6, lines 35-56).

6. Claims 68-70 are rejected under 35 U.S.C. 102(b) as being anticipated by Sugano, U.S. Patent No. 5,457,454.

Regarding claim 68 and 69, Sugano discloses an information selection/character input method comprising the steps of: displaying information on which a virtual cursor is positioned by moving the virtual cursor on a two-dimensional information table in response to an input operation; entering a confirmation command and selecting the information on which the virtual cursor is positioned (col. 7, line 42-col. 8, line 45).

Regarding claim 70, Sugano discloses the character input method according to claim 69, wherein the characters are Japanese Kana (phonetic words) characters and the information table is comprised of fifty phonetic words.

### ***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the

invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 10, 13, 18, 19, 23, 26, 31, 47, 49, 58 and 62 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foladare and well known prior art.

Regarding claim 10, Foladare discloses the vehicle loaded acoustic device according to claim 9 as described above.

Foladare, however, fails to disclose wherein the information is transmitted via an infrared ray.

The examiner contends, however, that infrared transmission is very well known in the art and the examiner takes official notice as such. Therefore, at the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Foladare with the teachings of well known prior art since such technology is used in a wireless environment for transmitting information short distances.

Regarding claim 13, Foladare discloses the vehicle-loaded acoustic device according to claim 7 as described above.

Foladare, however, fails to disclose, wherein the wireless transmission means, the wireless receiving means and the demodulation/decoding means include removable components and the removable components are used as communication equipment upon being removed.

However, it would have been obvious to a person of ordinary skill in the art at the time of invention to separate the components since it has been held that constructing a formerly integral structure in various elements involves only routine skill in the art.

Regarding claims 18 and 19, Foladare discloses the portable acoustic output device according to claim 16 as described above.

Foladare, however, fails to disclose wherein the keys are rotary or moving round push type operation keys.

The examiner contends, however, that such key types are well known in the art and the examiner takes official notice as such.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Foladare with well known prior art, as such modification could be used to change the aesthetic appearance of the device.

Regarding claim 23, Foladare discloses the device of claim 22 as described above. Foladare, however, fails to disclose wherein the display displays telephone conversation information.

The examiner contends, however, that such a display is well known in the art and the examiner takes official notice as such.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Foladare with well known prior art for the purpose of allowing the user see how long a conversation has been held in order to give the user an idea of how much the cost of the call would be.

Regarding claims 31, 47 and 49, Foladare discloses the wireless re-transmission device as described above. Foladare, however, fails to disclose wherein the frequency modulation is performed on the acoustic signal.

The examiner contends, however, that such modulation is well known in the art and the examiner takes official notice as such.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Foladare with well known prior art for the purpose of varying a characteristic of the signal for signal enhancement.

Regarding claims 58 and 62, Foladare discloses the music transmission method according to claims 55 and 58 as described above. Foladare, however, fails to disclose wherein the music group is comprised of music excluding music selections transmitted within a fixed time period in the past.

The examiner contends, however, that such a feature would have been obvious to one of ordinary skill in the art at the time of invention so as to avoid sending duplicate music, thereby saving valuable resources.

9. Claims 33, 34, 50 and 51 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foladare in view of Young, U.S. Patent No. 5,694,467.

Regarding claims 33 and 50, Foladare discloses a portable acoustic device with an inherent battery, comprising: wireless transmission means (col. 3, lines 60-66) for transmitting a service request signal (playlist ID) to request an acoustic signal desired by a user (col. 5, lines 51-61); wireless receiving means for receiving a transmission signal containing the acoustic signal transmitted in response to the service request signal (col. 6, line 48-col. 7, line 5); inherent demodulation/decoding means for applying demodulation and/or decoding processing to the signal received wireless receiving

means and restoring the received signal to an acoustic signal as evidenced by the fact that the playlist is played back to the user (col. 7, lines 7-18); and electro-acoustic transform means for transforming the acoustic signal restored by the demodulation/decoding means to a sound wave for output to the user in stereo (col. 5, lines 1-5).

Foladare, however, fails to disclose while a telephone call is in progress, vibrations of a part of the human body or a voice of a sender is detected by one of the electro-acoustic transform element of the electro-acoustic transform elements to form an audio signal and the audio signal is transmitted via the wireless transmission means, and the audio signal from the other party of the telephone call is received by the wireless receiving means to be output from one of the electroacoustic transform elements of the electroacoustic transform means, so that both the stereo sound output and the telephone call can be conducted.

In a similar field of endeavor, Young discloses an integrated sound/telephone headset system. Young further discloses while a telephone call is in progress, vibrations of a part of the human body or a voice of a sender is detected by one of the electro-acoustic transform element of the electro-acoustic transform elements to form an audio signal and the audio signal is transmitted via the wireless transmission means, and the audio signal from the other party of the telephone call is received by the wireless receiving means to be output from one of the electroacoustic transform elements of the electroacoustic transform means, so that both the stereo sound output and the telephone call can be conducted (col. 4, line 58-col. 5, line 26).

Art Unit: 2681

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Foladare with the teachings of Young in order to reduce the amount of audio output devices on the portable device.

Regarding claims 34 and 51, the combination of Foladare and Young discloses the devices as described above. The combination, however, fails to disclose wherein time division is used for transmission.

The examiner contends, however, that such a technique is well known in the art and the examiner takes official notice as such.

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify the combination of Foladare and Young with the teachings of well known prior art to allow simultaneous conversation to take place.

10. Claims 65-67 are rejected under 35 U.S.C. 103(a) as being unpatentable over Foladare in view of Chen, U.S. Patent No. 5,991,737.

Regarding claim 65, Foladare discloses a music receiving device comprising transmission means for transmitting a request signal to request music signal transmission; receiving means for receiving the music signal responding to the request signal (col. 5, lines 51-61, col. 6, line 48-col. 7, line 5) and display means for selectively displaying information (col. 3, lines 49-58, col. 5, lines 39-45).

Foladare, however, fails to disclose extracting means for extracting add-on information transmitted with the music signal from an output signal of the receiving

means; and display means for selectively displaying the add-on information of a first type and the add-on information of a second type from among the add-on information.

In a similar field of endeavor, Chen discloses automated consumer response to publicly broadcast information. Chen further discloses means for extracting add-on information transmitted with a music signal from an output signal of a receiving means; and display means for selectively displaying the add-on information of a first type and the add-on information of a second type from among the add-on information (col. 5, line 56-col. 6, line 6).

At the time of invention, it would have been obvious to a person of ordinary skill in the art to modify Foladare with the teachings of Chen in order to get further information regarding the acoustic signal.

Regarding claims 66 and 67, the combination of Foladare and Chen discloses the music receiving device according to claim 65, wherein the first type add-on information includes titles of music selections and the second type add-on information includes words of the music selections and displaying different types of codes or characters according to the types of add-on information (Chen, col. 5, line 56-col. 6, line 6).

#### ***Allowable Subject Matter***

11. Claims 3-6, 12, 21, 24, 25 and 36 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

12. The following is a statement of reasons for the indication of allowable subject matter: Regarding claim 3, prior art fails to suggest or render obvious wherein the demodulation/decoding means comprises: decoding means for separating main information and sub information from the [receiving] signal received by the wireless receiving means; feature information restoring means for restoring feature information from the sub information; information restoring means for conducting the restoration processing of the main information using the feature information restored by the feature information restoring means; and information source decoding means for restoring the acoustic signal upon decoding an output signal of the information restoring means.

Regarding claims 4-6, they are indicated allowable based on their dependence from allowable claim 3.

Regarding claims 12 and 36, prior art fails to suggest or render obvious the vehicle-loaded acoustic device further comprising present position locating means in which the information concerning the acoustic signal received by the wireless receiving means and information concerning the present position locating means are one of simultaneously and alternately displayed on the display means.

Regarding claim 21, prior art fails to suggest or render obvious the portable acoustic output device further comprising a main unit case and a cable, wherein the electro-acoustic transform means is connected via the cable to the main unit case in which the wireless transmission means, the wireless receiving means and the demodulation/decoding means are stored and the operating means is connected along a length of the cable.

Regarding claim 24, prior art fails to suggest or render obvious the device further comprising a main unit case and cable, wherein the electro-acoustic transform means is connected by the cable to the main unit case in which the wireless transmission means, the wireless receiving means and the demodulation/decoding means are stored, and the display means is connected along a length of the cable.

Regarding claim 25, it is indicated allowable based on its dependence from allowable claim 24.

13. Claims 37-40, 43-45 and 52-54 are allowed.

14. The following is a statement of reasons for the indication of allowable subject matter: Regarding independents claim 37 and 52, prior art fails to suggest or render obvious an information transmission device comprising: information source coding means for information source coding an input signal fed thereto; feature extracting means for extracting feature information included in the input signal; quantization means for vector quantizing an output signal of the information source coding means using the feature information extracted by the feature extracting means; modulation means for modulating an output signal of the quantization means; wireless transmission means for transmitting an output signal of the modulation means to a terminal device; wireless receiving means for receiving an output signal from the terminal device; and demodulation means for applying demodulation and/or decoding processing to the

signal received by the wireless receiving means wherein contents of the input signal are changed based on an output signal of the demodulation means.

Regarding independent claim 43, prior art fails to suggest or render obvious a wireless acoustic receiving method, comprising the steps of: receiving a signal; separating main information and sub information from the received signal; restoring feature information obtained from the sub information; and restoring the main information using the restored feature information and, by information source decoding the restored main information, restoring an acoustic signal from the received signal.

### ***Conclusion***

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Temica M. Davis whose telephone number is (703) 306-5837. The examiner can normally be reached Monday-Friday (alternate Fridays) from 9:00am-3:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Erika Gary can be reached on (703) 308-0123. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Temica M. Davis  
Examiner  
Art Unit 2681

June 28, 2004

  
**TEMICA M. DAVIS**  
**PATENT EXAMINER**